Building an Efficient, Competitive and Environmentally Sustainable Freight Supply Chain in North America

Theme: Perspectives on accelerating the adoption of advanced technologies and energy savings for the multimodal, North American supply chain

Susan Alt, Vice President, Strategy & Industry Relations

Energy needs will double in 30 years

- Increasing population
- Improved standard of living
- Industrialization
- Globalization

That’s why we need to take action now!

Our vision: Climate-Neutral Transportation Solutions

1972: proponent of environmental solutions

1980: Volvo's core values: quality, safety, environmental care

2010: reduce CO_2 emissions at least 50% by 2012

INFRASTRUCTURE

FUELS

VEHICLES

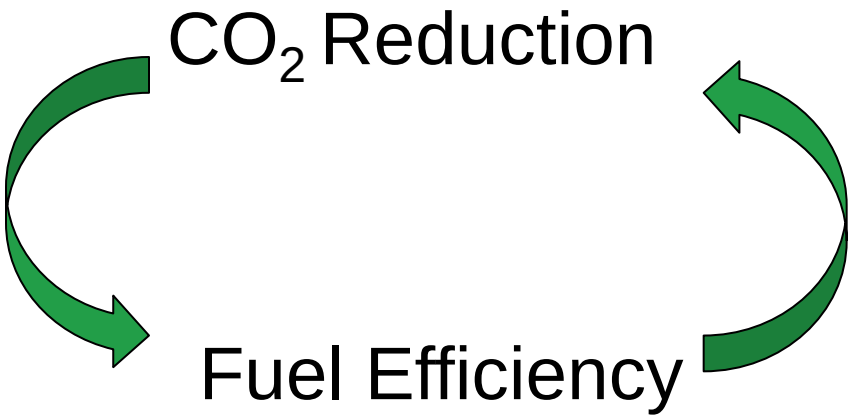
LOGISTICS

RESEARCH

Volvo as a shipper……

- Volvo (as a shipper) was a founding member of EPA Smartway
  - Fit with our values
  - Made economical sense
- To create awareness, asked carriers to be either 14000 ISO (Environmental standard) certified or a member of EPA Smartway as a transporter
  - Rewarded carriers in operational scorecards as incentive
- As shippers and carriers economically benefitted from SmartWay specifications, the program has successfully grown

If the same vehicle moves more freight….



1 gallon of diesel burned = 22.3 lbs. of CO_2

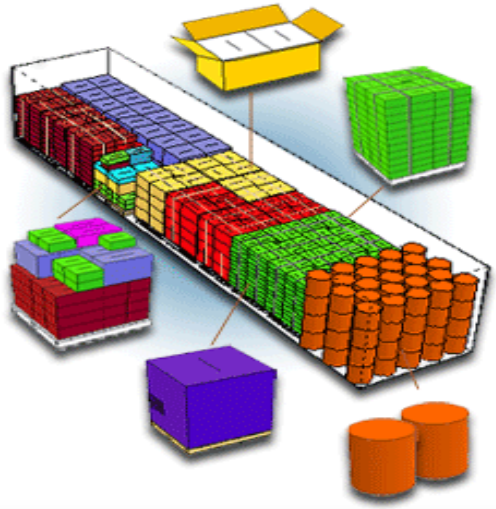
Example:
1 truck logs 120,000 miles/year @ 6 mpg
3% improvement of fuel economy (6.18 mpg)
Avoids **6.5 tons of CO_2** emissions

VOLVO

Load Optimization = More Freight Less Fuel

LTL = Less than Truckload

- Space on trailer sold by weight, tariff , and “class” (FAK)

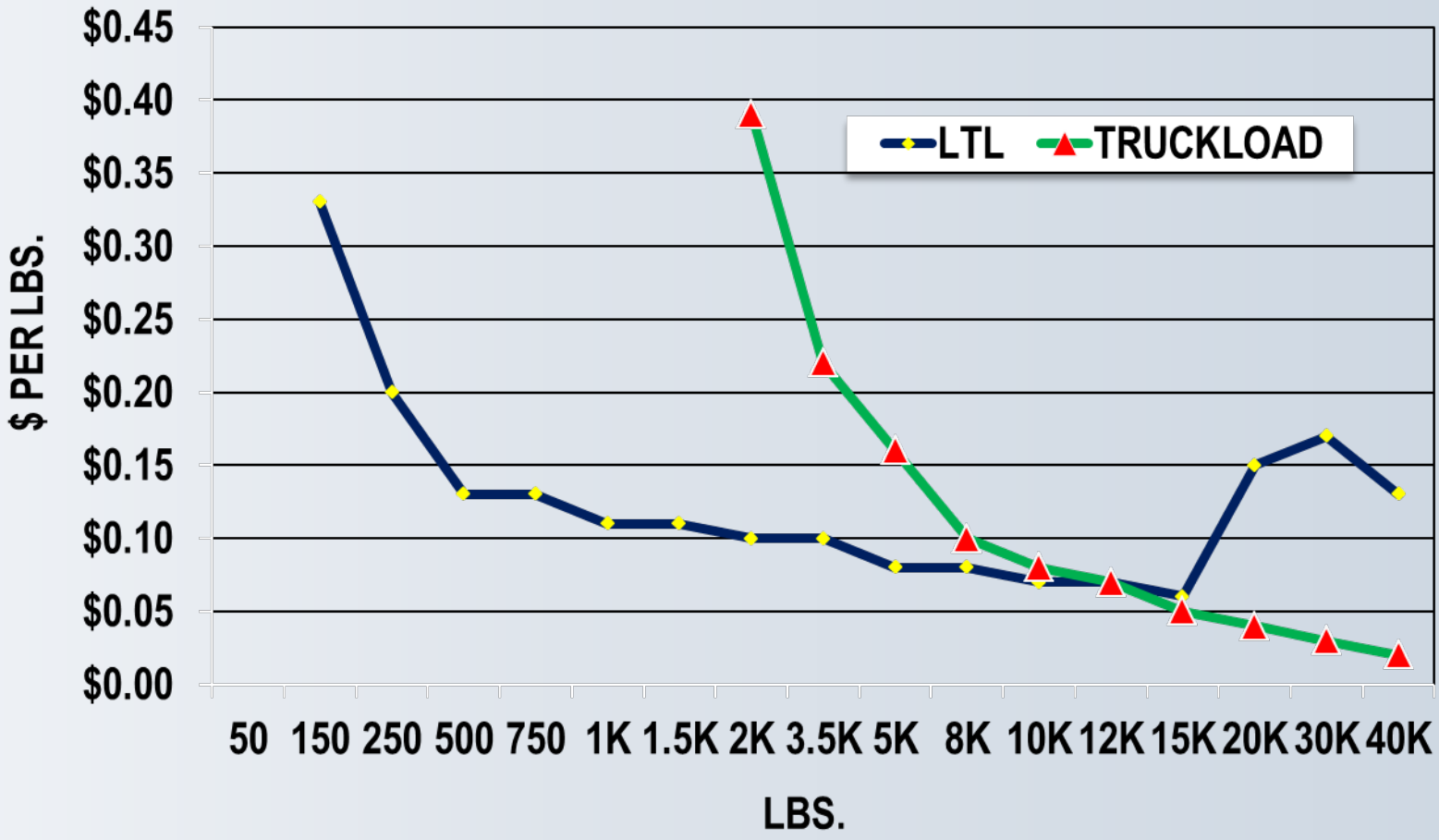


$$

TL = Truckload

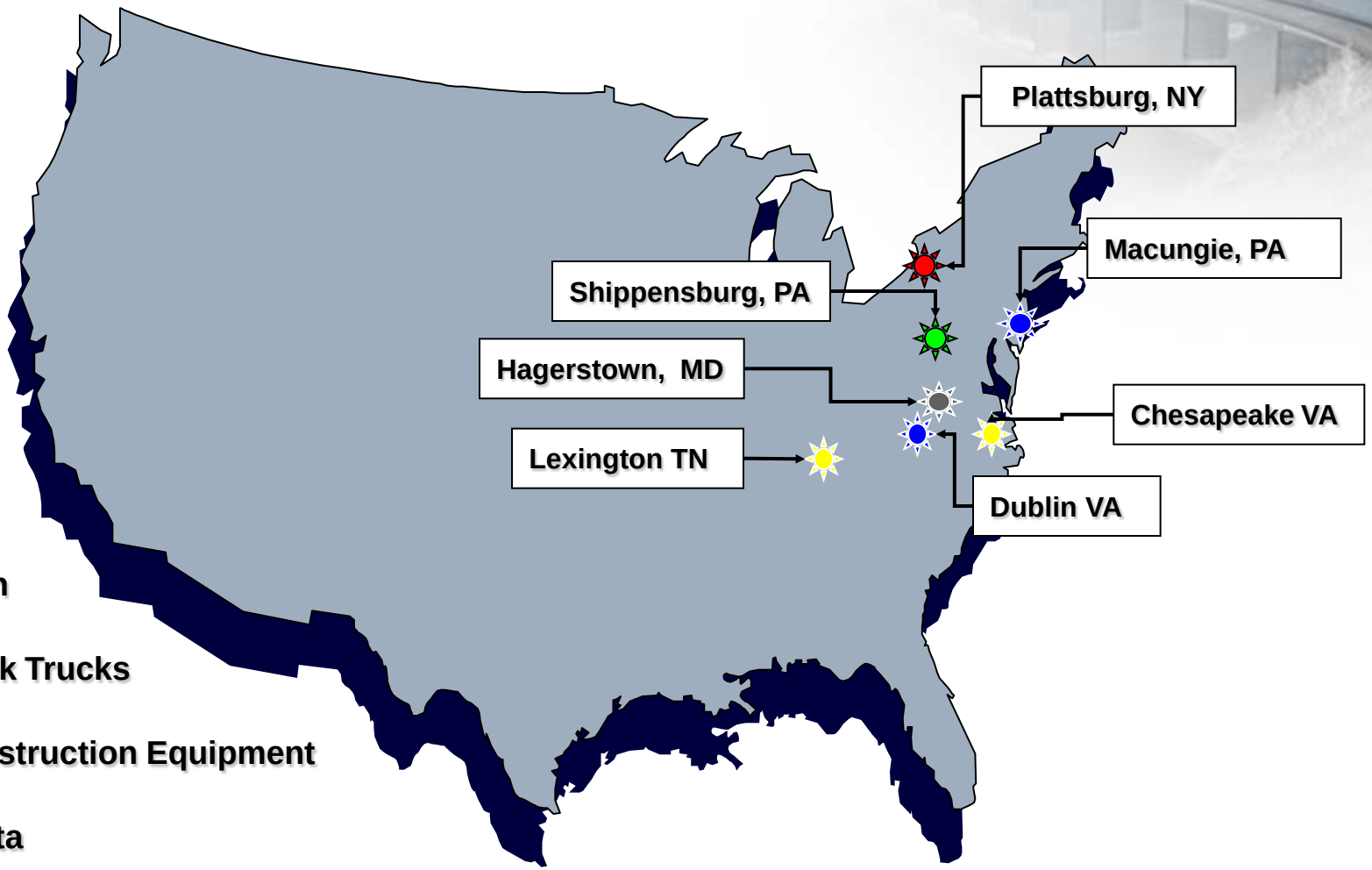
- Entire trailer sold for set price for point to point

Our task is to optimize the total Transportation Cost by Mode, in the region of operation



Figures are for presentation only

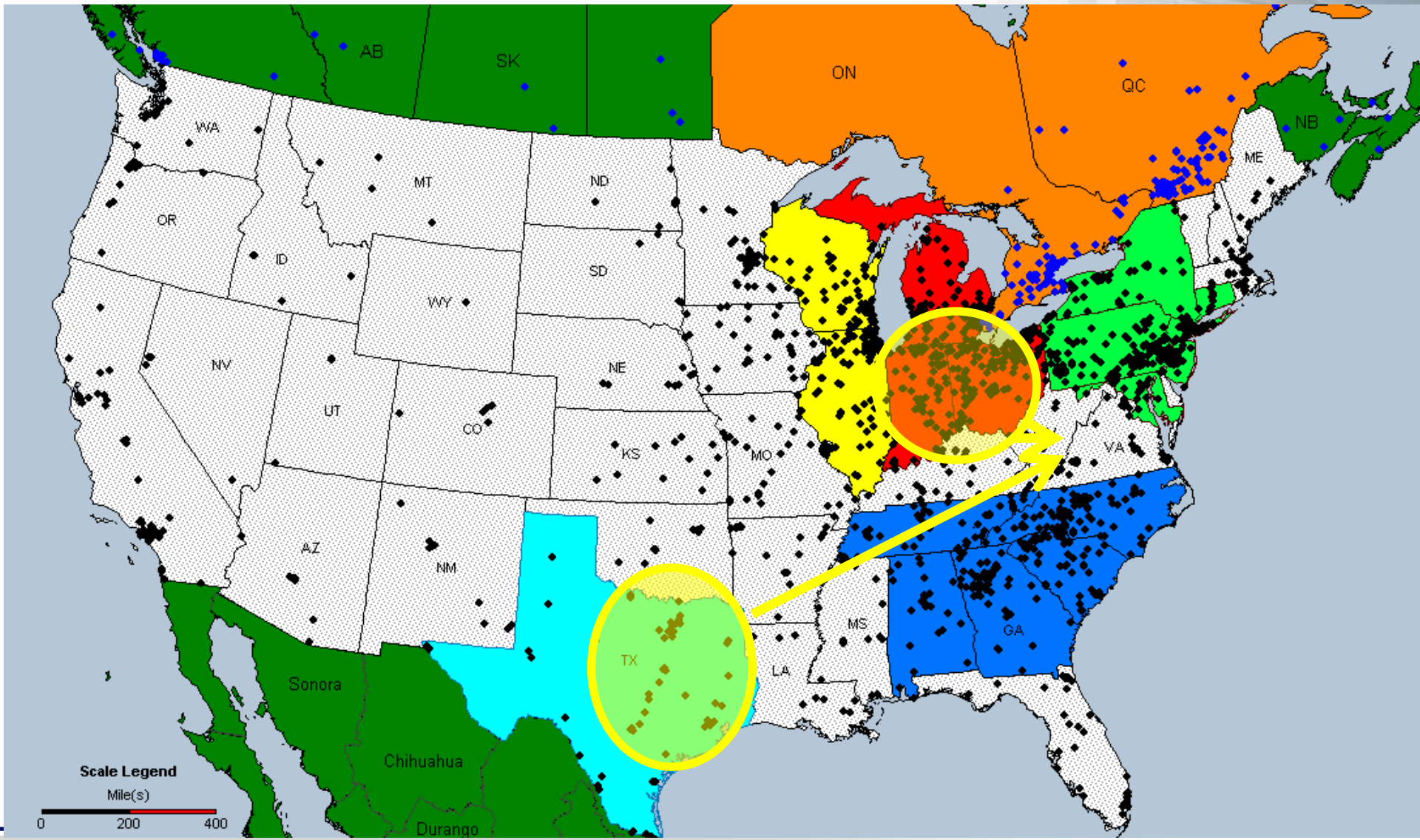
Volvo Production Plants in USA



- Powertrain
- Volvo/Mack Trucks
- Volvo Construction Equipment
- Volvo Penta
- Volvo Buses (Nova)

VOLVO

Dynamic “Milk Runs” from supplier to supplier builds Truckloads



VOLVO

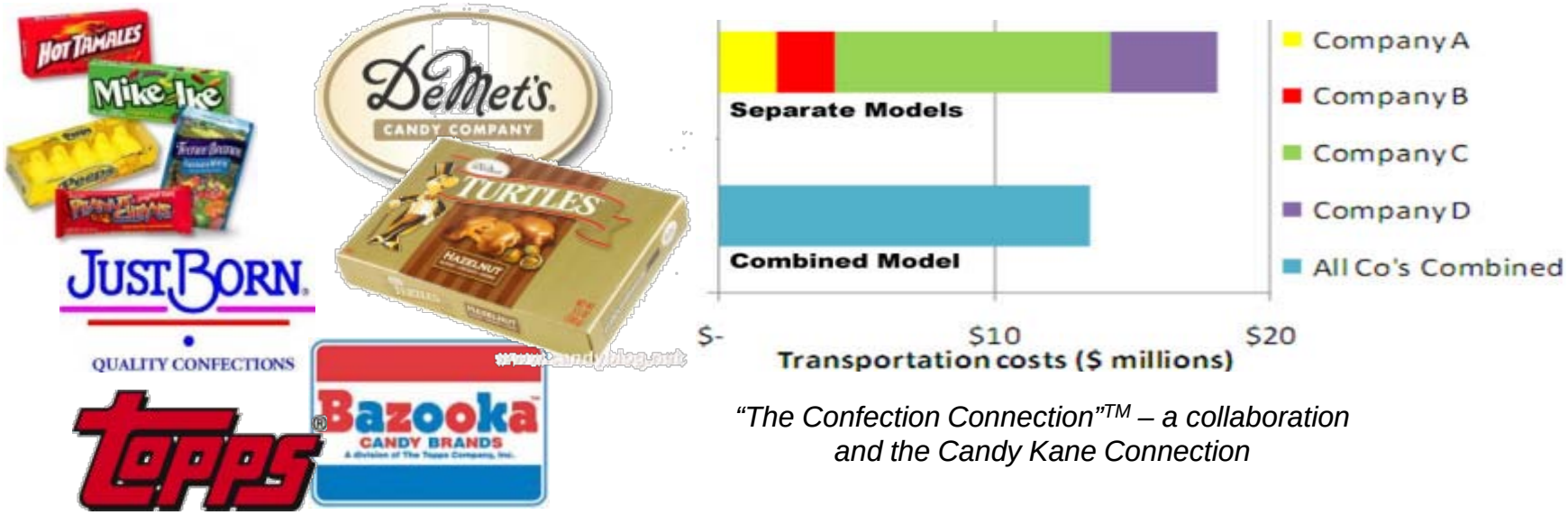
Freight consolidation makes sense

A redesign of the supply chain can move the same amount of freight in:

- Fewer shipments
- Fewer drivers (and there's a shortage!)
- Fewer trucks on the road
- Fewer emissions in the air
- Less fuel used hauling the freight due to better optimization of load
- Significant $$$$ savings on freight costs to shipper when properly designed

Can you believe it?

- **Competitors** are SHARING loads to reduce supply chain costs
  - Building up full trailer loads …saving $$$ and reducing fuel consumed



"The Confection Connection"™ – a collaboration and the Candy Kane Connection

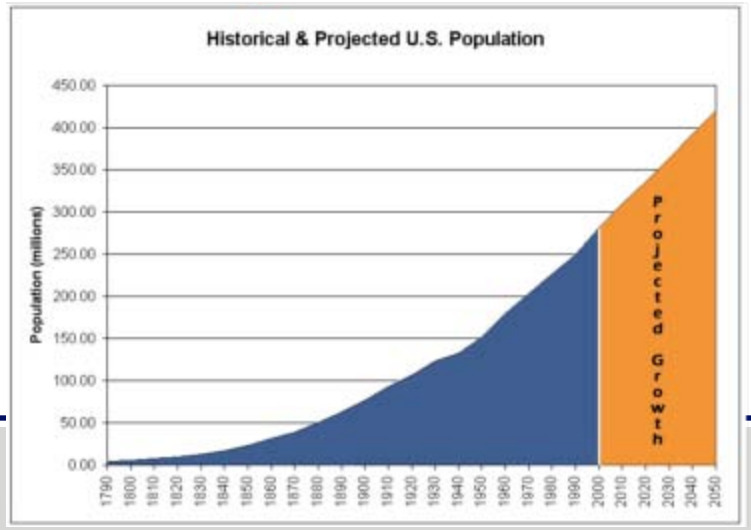
Credit: Lehigh University's Center for Value Chain Research (VCR), Managing Director Joel Sutherland, OHL Logistics . Kane is Able Logistics: Candy Kane Consolidation program

In general…a more sustainable supply chain comes from moving more freight with less fuel

Intermodal for long haul, heavy, non-time sensitive freight

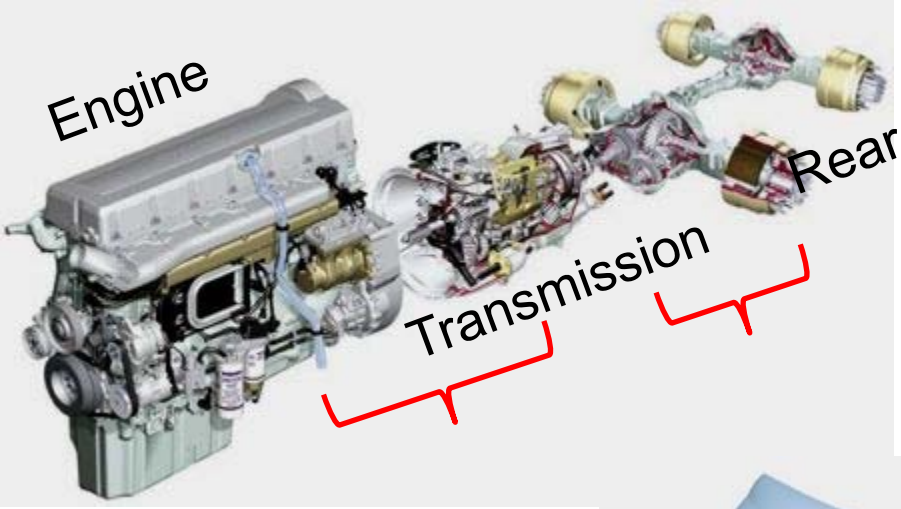
Longer Combination Vehicles saves fuel and are safe..for time sensitive, lighter weight freight

US Population Growth



VOLVO

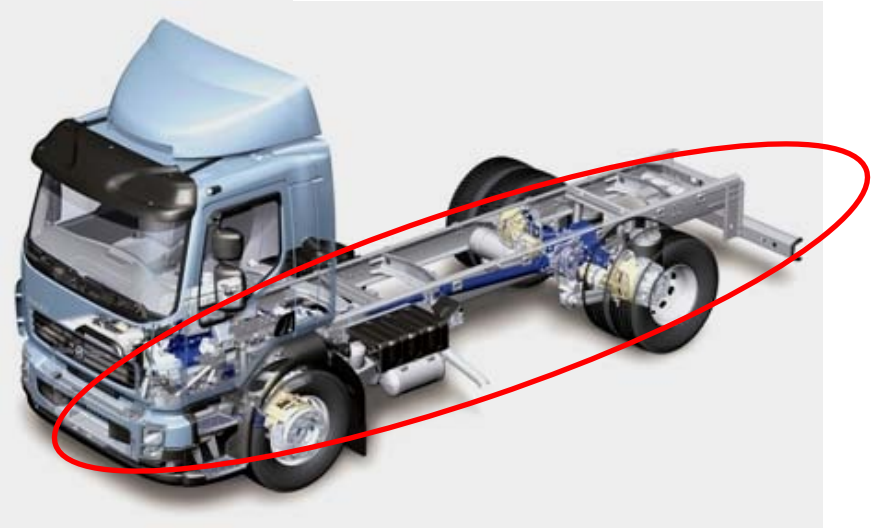
Volvo as a supplier to the carrier can impact a more sustainable supply chain…



Smart Software developed for the:

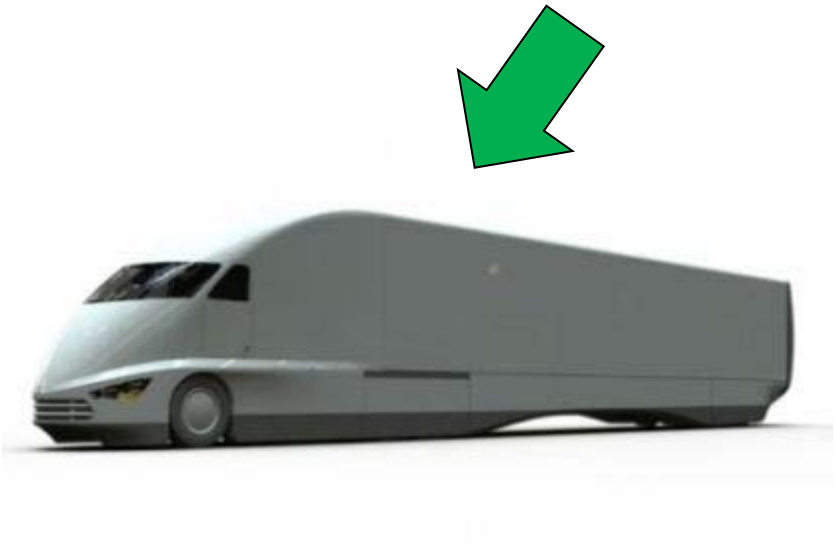
Engine + Transmission + Rear axles to "talk" can dramatically improve fuel efficiency by optimizing road and load conditions

Helps driver shortage too!!



SmartWay℠
Transport Partner
Getting There With Cleaner Air

GHG Regulations for HD Trucks



VOLVO